

Lockwood Landfill Proposed Expansion Modification 2012



Lockwood Landfill Modification Presentation

- Landfill Overview
- Currently Permitted Specifications vs. Proposed
- Environmental & Operational Requirements
- Closure & Post-Closure Requirements
- Final In-Place Monitoring Network
- View From Lockwood
- Currently Permitted Final Grading Plan
- Landfill Progression 1 through 8 to Final Configuration
- Summary

Lockwood Landfill Overview ~ Storey County

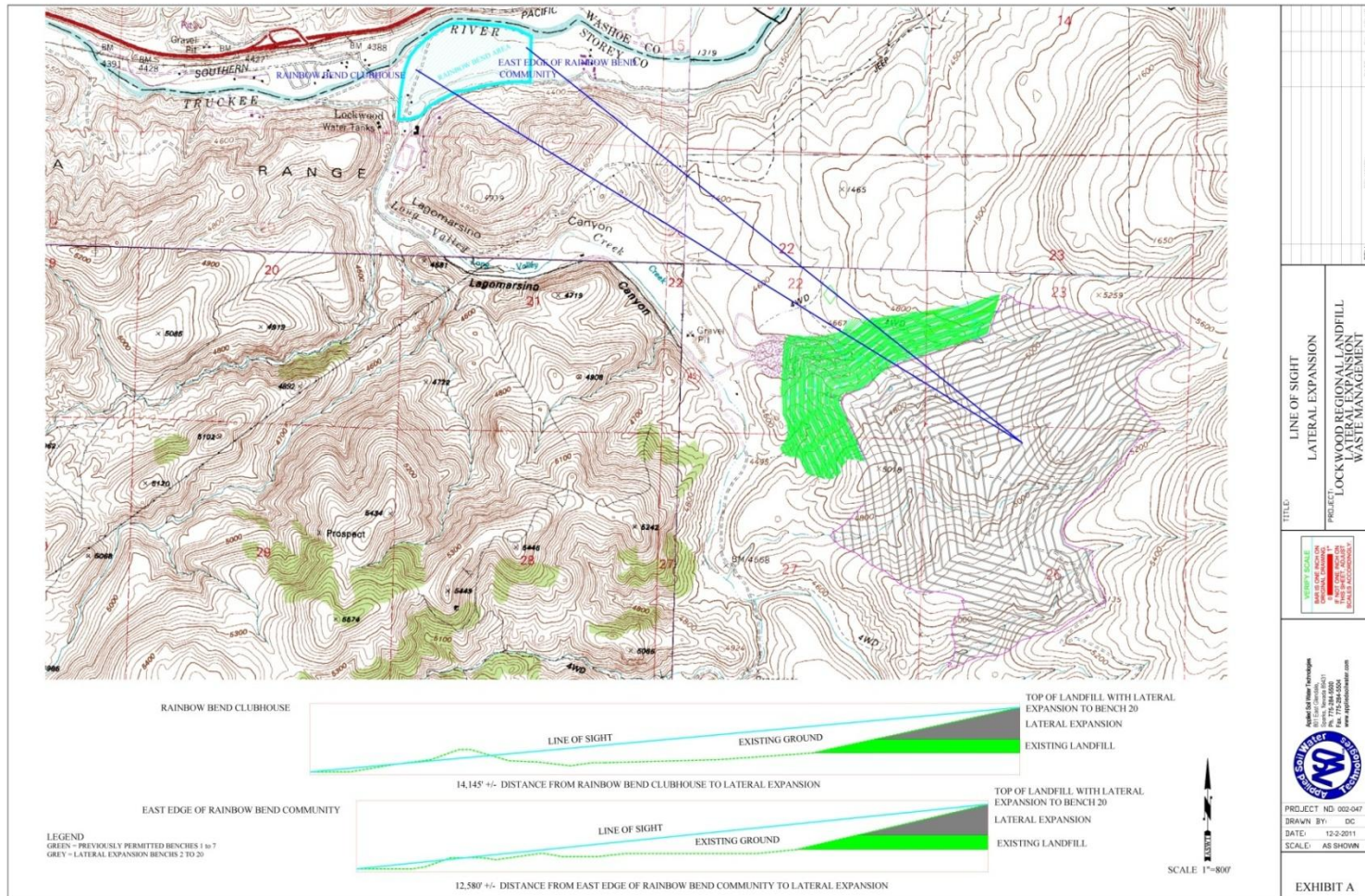


Environmental & Operational Requirements

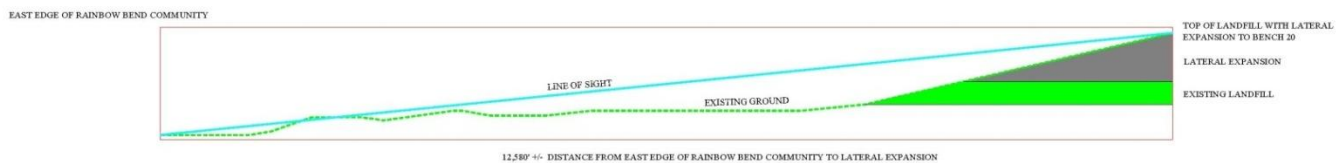
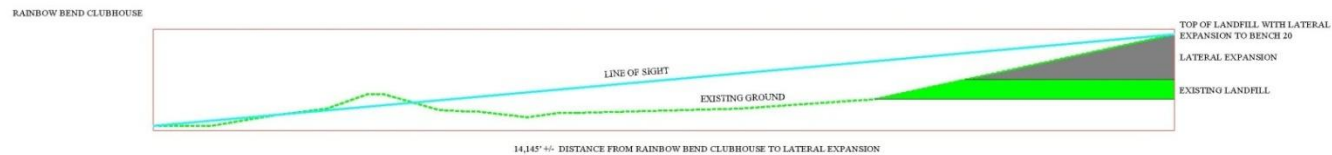
- ✓ Monitoring and control of landfill gas
- ✓ Hazardous waste, PCB's prohibited
- ✓ Liquid waste prohibited
- ✓ Daily cover
- ✓ Litter control
- ✓ A site specific Integrated Site-Wide Contingency Plan
 - ✓ to reduce the burden on local emergency services and provide for specific training for landfill personnel
- ✓ A focused site-wide Facility Monitoring Program
- ✓ Expanded Monitoring on the West side of Landfill to protect adjacent areas

View From Lockwood

Landfill progresses away from Truckee River & Lockwood



View From Lockwood



LEGEND

GREEN = PREVIOUSLY PERMITTED BENCHES 1 to 7
GREY = LATERAL EXPANSION BENCHES 2-20

Current vs. Proposed Permitted Specifications

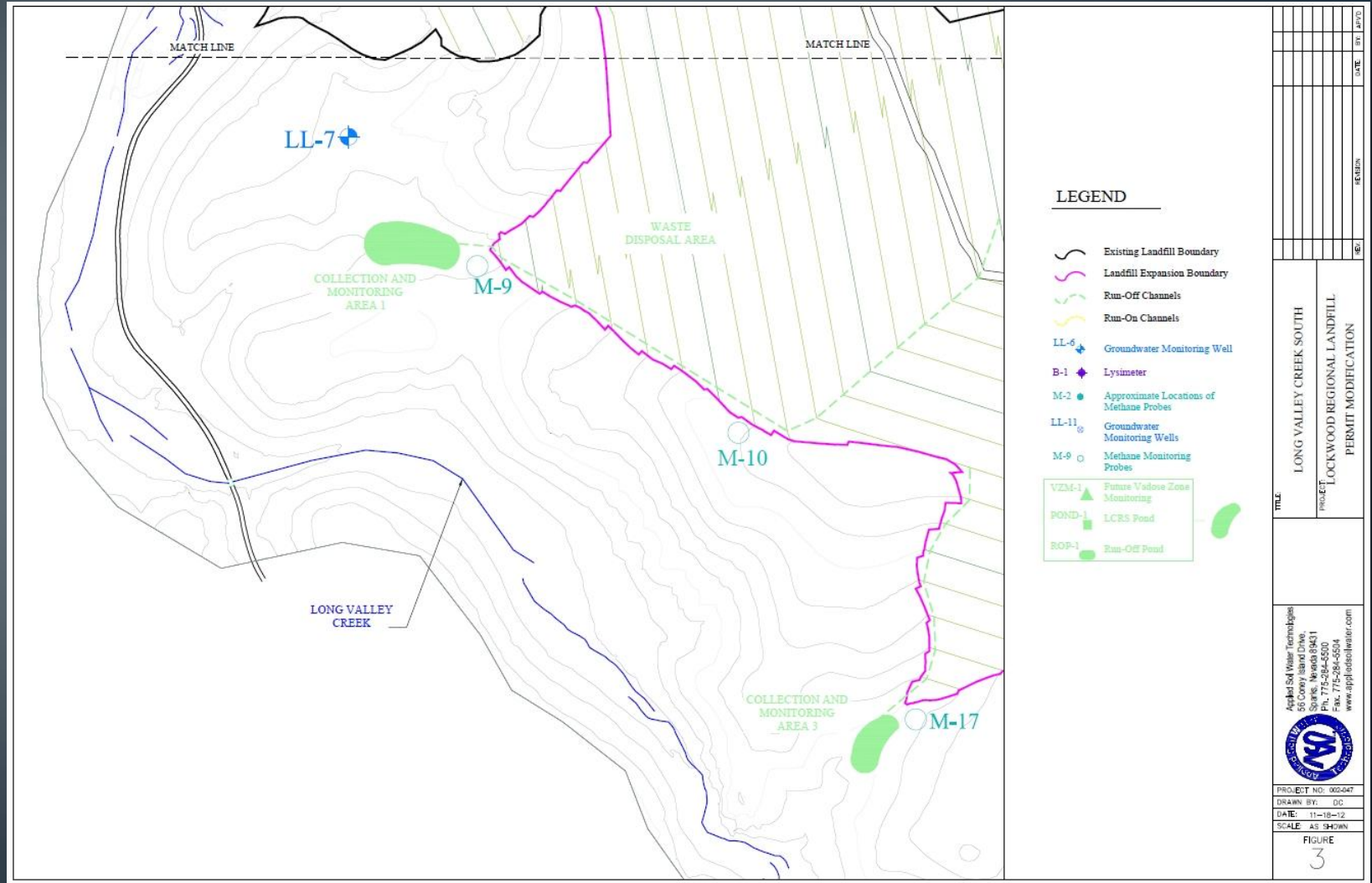
- Area – 350 acres
 - Volume – $64.8(10^6)$ yd³
 - Wastes –
 - MSW
 - C&D
 - Petroleum contaminated soils
 - Asbestos
 - Waste Tires
 - Biosolids (dry)
 - Animal Carcasses
 - Monitoring Systems
 - Groundwater
 - Vadose Zone [2 Lysimeters]
 - Methane
 - Design Standards
 - Approved Alternative Liner
 - System to control Runon and Runoff
- Area – 805 acres
 - Volume – $250(10^6)$ yd³
 - Wastes – No Change
 - Dedicated C&D area
 - Monitoring Systems
 - Groundwater [6 additional wells]
 - Vadose Zone [[2 additional wells]
 - Methane [9 additional wells]
 - Design Standards
 - HDPE Liner System [60 mio & 80 mil depending on slope]
 - System to control Runon and Runoff
 - Leachate Collection
 - Dedicated Collection for liquids generated by the Landfill
 - Landfill Gas Control
 - Methane Monitoring/recovery and Controls

Lockwood Landfill Overview ~ Storey County

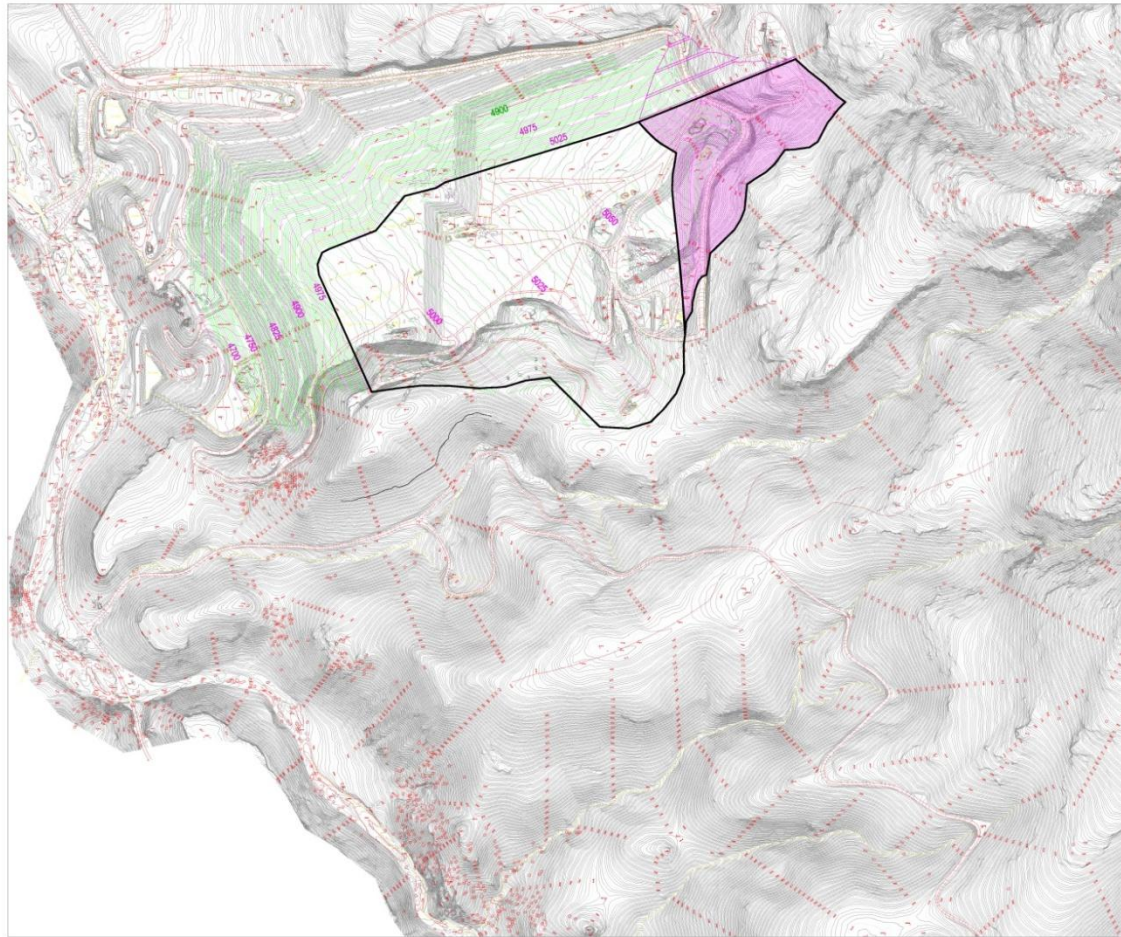


LEGEND





Expansion ~ Phase 1



NOTE:
TOPOGRAPHY DATE - 4-8-2011
TOPOGRAPHY PROVIDED BY WASTE
MANAGEMENT

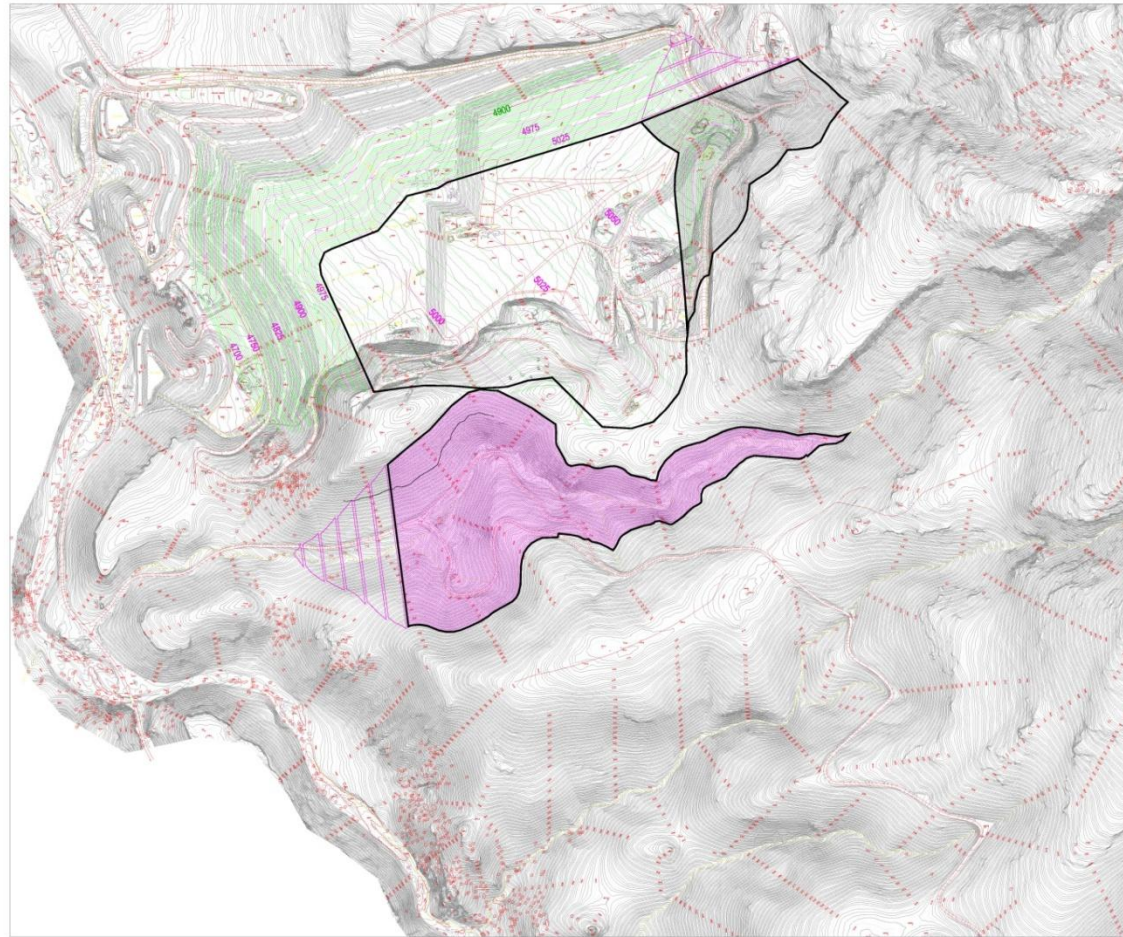
TITLE:	BUILDOUT 1	
	LATERAL EXPANSION	
PROJECT:	WM LOCKWOOD LANDFILL	
	LATERAL EXPANSION	
PROJECT NO.	000-047	
DRAWN BY:	SWS	
DATE:	8-2011	
SCALE:	1"=400'	
C-7		
SHEET 7 OF X		

REV	REVISION	DATE	BY	APPD



Applied Soil Water Technologies
10000 S. 28th Ave.
Sparks, Nevada 89431
Ph. 775-284-5500
Fax. 775-284-5504
www.appliedsoilwater.com

Expansion ~ Phase 3



NOTE:
TOPOGRAPHY DATE - 4-01-2011
TOPOGRAPHY PROVIDED BY WASTE
MANAGEMENT

PROJECT NO:	BUILDOUT 2	
	LATERAL EXPANSION	
DRAWN BY:	WM LOCKWOOD LANDFILL	
	LATERAL EXPANSION	
DATE:	8-2011	
SCALE:	1"=400'	
C-8		
SHEET 8 OF X		




Applied Soil Water Technologies
10000 S. 10th Ave.
Sparks, Nevada 89431
Ph: 775-284-5500
Fax: 775-284-5504
www.appliedsoilwater.com

A topographic map of a mountainous region. A large, irregularly shaped area in the center-right is shaded in purple. To the left of this purple area, there are green contour lines and a green-shaded region. The map features numerous contour lines, with some labeled with elevations such as 4850, 4875, and 5025. A network of roads or trails is visible, including a prominent road on the left side. The terrain is rugged, with various peaks and valleys. The purple-shaded area appears to be a specific land use or boundary, possibly a reservoir or a protected area. The green-shaded area to the left might represent a different land use or a specific contour interval. The overall map is detailed, showing the complex topography of the region.



NOTE:
TOPOGRAPHY DATE - 4-01-2011
TOPOGRAPHY PROVIDED BY WASTE
MANAGEMENT

Applied SA Water Technologies 601 East Glenville, Sparks, Nevada 89431 Ph. 775-284-5500 Fax. 775-284-5504 www.appliedsaewater.com	TITLE: BUILDOUT 3 LATERAL EXPANSION		PROJECT: WM LOCKWOOD LANDFILL LATERAL EXPANSION	REV	BY	DATE	APP'D



PROJECT NO.:	002-047
DRAWN BY:	SWC
DATE:	8-2011
SCALE:	1"=400'

C-9

SHEET 9 OF 10

NOTE:
TOPOGRAPHY DATE - 4-01-2011
TOPOGRAPHY PROVIDED BY WASTE
MANAGEMENT

Applied Soil Water Technologies
801 East Glendale,
Sparks, Nevada 89431
Ph. 775-284-5500
Fax. 775-284-5504
www.appliedsoilwater.com



PROJECT NO:	002-047
DRAWN BY:	SVZ
DATE:	8-2011
SCALE:	1"=400'

C-10
SHEET 10 OF X

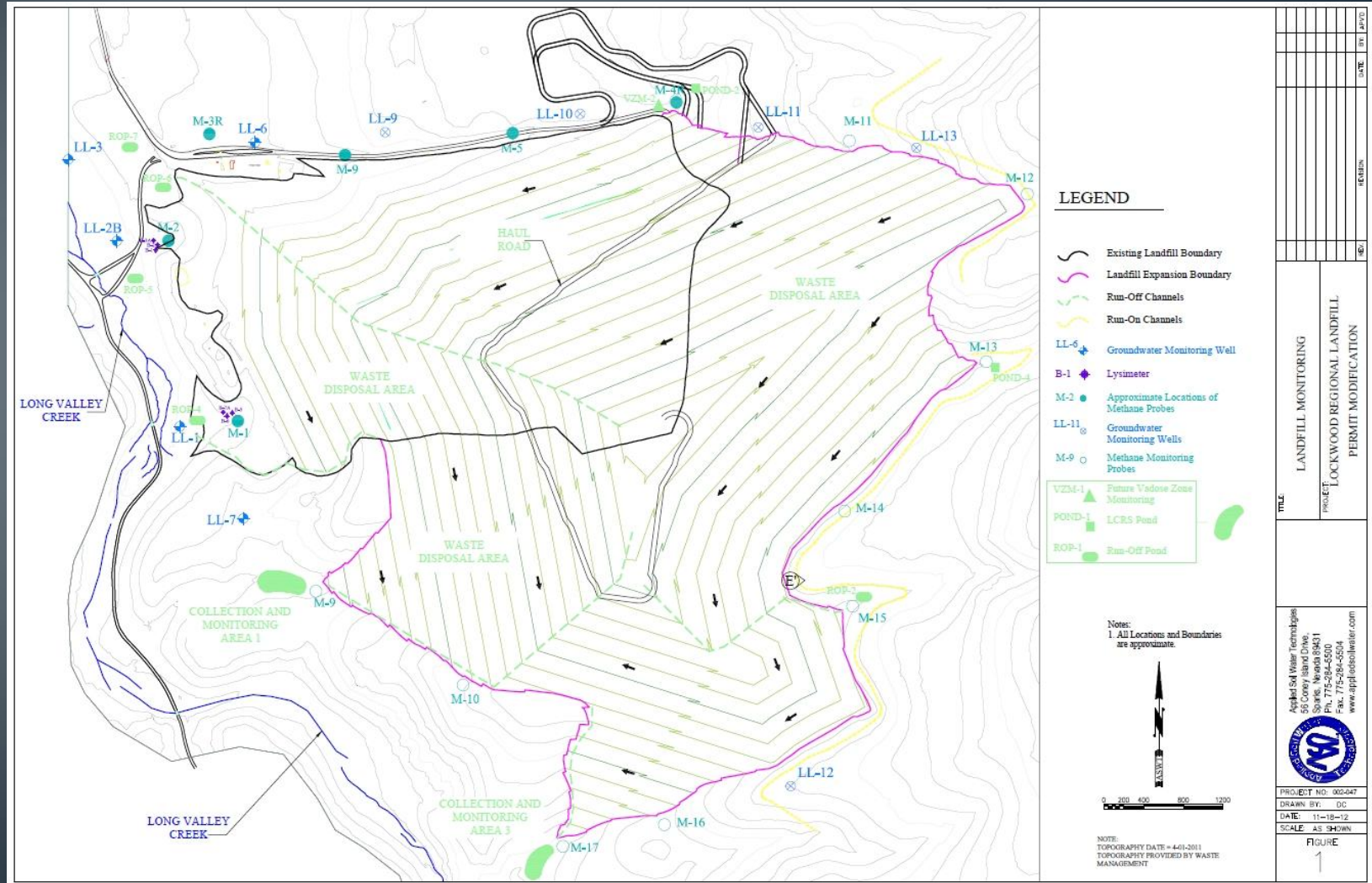
TITLE	BUILDOUT 4 LATERAL EXPANSION	REV	REVISION	DATE	BY	APPD
PROJECT:	WM LOCKWOOD LANDFILL LATERAL EXPANSION					

A topographic map of a mountainous area. The map features a series of purple contour lines that define a specific region, likely a watershed or a study area. The region is shaded in green. The map includes various elevation markers, such as 4800, 4875, and 5025. The terrain is rugged, with numerous peaks and valleys. The map also shows a network of roads and trails, indicated by red dashed lines. The overall appearance is that of a detailed topographic map used for land management or environmental study.



NOTE:
TOPOGRAPHY DATE - 4-01-2011
TOPOGRAPHY PROVIDED BY WASTE
MANAGEMENT

Applied Soil Water Technologies 601 East Gendle, Sparks, Nevada 89431 Ph. 775-284-5000 Fax. 775-284-5004 www.appliedsoilwater.com	TITLE: BUILDOUT 5 LATERAL EXPANSION		PROJECT: WM LOCKWOOD LANDFILL LATERAL EXPANSION	REV#	BY	DATE	APP'D



Closure & Post-Closure Requirements

- ✓ Final Cover Construction supervised by Nevada PE
- ✓ Final Cover Maintenance & Monitoring
- ✓ Groundwater, Methane, Vadose and Leachate Monitoring
- ✓ 30 years of Post-Closure Care
- ✓ Ongoing Closure Certifications by NDEP
- ✓ Landfill/Leachate & Gas Collection
- ✓ Deed Restricted Land